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Art Unit: 2655

AMENDMENT

This listing of claims will replace all prior versions, and listings, of claims in the

application:

Listing of Claims:

What is claimed is:

1 - 13 (cancelled).

13. (currently amended) ~~In a~~ A communication device configured to operate in a

discontinuous transmission packet telephony network having a channel access delay, the

~~improvement~~ communication device comprising:

an access delay reducer ~~(154)~~ configured to remove a first portion of at least one

frame of input voice signal to form a time-scaled frame, the first portion comprising an

integer number of a pitch ~~period=s~~ period's worth of the input voice signal.

14. (original) The communication device according to claim 13, wherein the access delay

reducer is configured to remove the first portion from a terminal section of said frame.

15. (original) The communication device according to claim 14, wherein the access delay

reducer is further configured to form an overlap-added segment at an end portion of the time-

scaled frame.

16. (original) The communication device according to claim 15, wherein the overlap-added

segment is formed from a first segment of the frame, the first segment located immediately

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before the first portion, and a second segment of the frame, the second segment comprising

an endmost portion of the terminal section of the frame.

17. (original) The communication device according to claim 16, wherein the first and second

segments are each multiplied by a window and added together to form the overlap-added

segment.

18. (original) The communication device according to claim 13, wherein the access delay

reducer is configured to remove a first portion from a corresponding frame for each talkspurt

of a call.

19. (original) The communication device according to claim 13, wherein the access delay

reducer is configured to remove the first portion from the frame, even if the first portion

comprises unvoiced speech.

20. (new)   A method for processing a speech signal for transmission over a network, the

method comprising:

    (a)   receiving an input frame of a speech signal; and

    (b)   removing an integer number of a pitch period's worth of the speech signal

from the input frame to form a time-scaled frame, wherein the speech signal is compressed to

reduce an access delay.

21. (new)   The method of claim 20, further wherein the time-scaled frame is a

compressed time-scaled frame.

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22. (new)   The method of claim 21, further comprising:

    (c)   repeating steps (a) and (b) until a plurality of compressed time-scaled frames

corresponds to the access delay.

23. (new)   The method of claim 20, wherein a new pitch period is calculated for each

frame of voice signal from which a corresponding first portion is cut.

24. (new)   The method of claim 20, further comprising:

    establishing a time interval over which the access delay is to be mitigated, wherein the

time interval is longer than the access delay.

25. (new)   The method of claim 20, further comprising:

    establishing a value governing a rate at which the access delay is mitigated.

26. (new)   The method of claim 20, wherein steps (a)-(b) are performed for each talkspurt

of a call.

27. (new)   The method of claim 20, wherein the removed portion of the speech signal is

removed from a terminal section of the input frame.

28. (new)   The method according to claim 27, wherein an end portion of the time-scaled

frame comprises an overlap-added segment.

29. (new)   The method of claim 28, wherein the overlap-added segment is formed from a

first segment of the input frame, the first segment located immediately before the removed

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portion and a second segment of the input frame, the second segment comprising an endmost

portion of the terminal section of the input frame.

30. (new)   The method of claim 29, wherein the first and second segments are each

multiplied by a window and added together to form the overlap-added segment.

31. (new)   The method of claim 20, wherein the integer number of a pitch period's worth

of the speech signal is removed even if the integer number of the pitch period's worth of the

speech signal comprises unvoiced speech.

32. (new)   The method of claim 20, wherein the access delay is a channel access delay

for the network.

33. (new)   The method of claim 20, wherein the access delay is due to a delay associated

with a voice activity detector.

34. (new)   A computing device that processes a speech signal for transmission over a

network, the computing device comprising:

    (a)   means for receiving a speech signal from a speaker; and

    (b)   means for using a pitch period of the speaker for compressing the speech

signal to reduce access delay to a channel.

35. (new)   A method for processing a speech signal from a speaker for transmission over

a network, the method comprising:

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compressing frames of received speech using an estimated pitch period of the speaker;

and

encoding and transmitting the compressed frames of received speech until a channel

access delay is mitigated.

36. (new)   The method of claim 35, further comprising:

estimating the pitch period associated with the received speech, wherein compressing

the frames of received speech further comprises removing from an input frame an integer

number of the pitch period's worth of the received speech to form a time-scaled frame.

36. (new)   The method of claim 35, further comprising:

receiving an indication from a voice activity detector that a speech signal is being

received before compressing the speech.

37. (new)   The method of claim 35, further comprising:

buffering a plurality of frames of received speech before compressing the speech.